Application No: 10590761   Version No: 2.0

Input Set:

Output Set:

Started:	2010-04-05 12:09:29.340
Finished:	2010-04-05 12:09:31.963
Elapsed:	0 hr(s) 0 min(s) 2 sec(s) 623 ms
Total Warnings:	62
Total Errors:	0
No. of SeqIDs Defined:	62
Actual SeqID Count:	62

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

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                    Output Set:

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                Total Errors: 0
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          Actual SeqID Count: 62

Error code   Error Description

                   This error has occured more than 20 times, will not be displayed

<110>   Kitagawa, Harukazu
        Iho, Sumiko
        Matsuki, Takasumi
        Yamamoto, Saburo

<120>   Immunostimulatory Oligonucleotide that induces interferon alpha

<130>   58270

<140>   10590761
<141>   2010-04-05

<150>   JP 2004-053795
<151>   2004-02-27

<160>   62

<170>   PatentIn version 3.5

<210>   1
<211>   30
<212>   DNA
<213>   Artificial sequence

<220>
<223>   modified Sequence encoding BCG protein

<220>
<221>   misc_feature
<222>   (7)..(12)
<223>   n is a, c, g, or t

<400>   1
accgatnnnn nngccggtga cggcaccacg   30

<210>   2
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   sequence of CpG DNA that is active in mice

<400>   2
gagaacgctc gaccttcgat   20

<210>   3
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>
<223> sequence of CpG DNA that induces IFN-g production

<400> 3
tccatgacgt tcctgatgct   20

<210> 4
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense DNA that activates NK cells

<400> 4
tctcccagcg tgcgccat   18

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> CpG DNA reported to activate human B cells

<400> 5
ttgcttccat cttcctcgtc   20

<210> 6
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> cDNA encoding BCG protein

<220>
<221> misc_feature
<222> (7)..(12)
<223> n is a, c, g, or t

<400> 6
accgatnnnn nngccggtga cggcaccacg   30

<210> 7
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> cDNA encoding BCG protein

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<400>  7
accgataacg ctgccggtga cggcaccacg                                    30



<210>  8
<211>  30
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  cDNA encoding the BCG protein modified to activate human NK cells

<400>  8
accgataacg tcgccggtga cggcaccacg                                    30



<210>  9
<211>  30
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  cDNA encoding for the BCG protein modified to enhance
       IFN-g-inducing activity

<400>  9
accgatcgat cggccggtga cggcaccacg                                    30



<210>  10
<211>  30
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  cDNA encoding the BCG protein modified to enhance IFN-g-inducing
       activity

<400>  10
gggggggggg gacgatcgtc gggggggggg                                    30



<210>  11
<211>  30
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Unmodified CpG palindrome

<400>  11
gggggggggg ggaacgttgg gggggggggg                                    30



<210>  12
<211>  10
<212>  DNA
```

<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA

<400> 12
gacgatcgtc   10

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 13
ggacgatcgt cggggggggg   20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 14
gggacgatcg tcggggggg   20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 15
ggggacgatc gtcggggggg   20

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 16
ggggggacg atcgtcgggg   20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 17
gggggggggac gatcgtcggg   20

<210> 18
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunotimulatory oligonucleotide

<400> 18
ggggggggga cgatcgtcgg   20

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 19
ggggggggg acgatcgtcg   20

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Immunostimulatory oligonucleotide

<400> 20
gggggggggc acgatcgtgg   20

<210> 21
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3'
      end

```
<400>  21
gacgatcgtc g                                                          11


<210>  22
<211>  12
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3'
       end

<400>  22
gacgatcgtc gg                                                         12


<210>  23
<211>  13
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3'
       end

<400>  23
gacgatcgtc ggg                                                        13


<210>  24
<211>  14
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3'
       end

<400>  24
gacgatcgtc gggg                                                       14


<210>  25
<211>  15
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3'
       end

<400>  25
gacgatcgtc ggggg                                                      15


<210>  26
```

<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3'
      end

<400> 26
gacgatcgtc gggggg   16

<210> 27
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3'
      end

<400> 27
gacgatcgtc ggggggg   17

<210> 28
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3'
      end

<400> 28
gacgatcgtc gggggggg   18

<210> 29
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3'
      end

<400> 29
gacgatcgtc ggggggggg   19

<210> 30
<211> 20
<212> DNA
<213> Artificial Sequence

<220>

<223>   Core sequence of CpG DNA modified by adding poly G at 3'
         end

<400>   30
gacgatcgtc ggggggggg   20

<210>   31
<211>   15
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Core sequence of CpG DNA modified by adding poly G at 5'
         end

<400>   31
gggggacga tcgtc   15

<210>   32
<211>   16
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Core sequence of CpG DNA modified by adding poly G at 5'
         end

<400>   32
ggggggacg atcgtc   16

<210>   33
<211>   17
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Core sequence of CpG DNA modified by adding poly G at 5'
         end

<400>   33
gggggggac gatcgtc   17

<210>   34
<211>   18
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Core sequence of CpG DNA modified by adding poly G at 5'
         end

<400>   34
gggggggga cgatcgtc   18

<210> 35
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 5'
      end

<400> 35
gggggggggg acgatcgtc   19

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 5'
      end

<400> 36
gggggggggg gacgatcgtc   20

<210> 37
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
      ends

<400> 37
gacgatcgtc gggggggggg   20

<210> 38
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
      ends

<400> 38
ggacgatcgt cgggggggggg g   21

<210> 39
<211> 22
<212> DNA

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
    ends

<400> 39
gggacgatcg tcggggggggg gg   22

<210> 40
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
    ends

<400> 40
ggggacgatc gtcgggggggg ggg   23

<210> 41
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
    ends

<400> 41
gggggacgat cgtcgggggg gggg   24

<210> 42
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
    ends

<400> 42
gggggacga tcgtcggggg ggggg   25

<210> 43
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Core sequence of CpG DNA modified by adding poly G at 3' and 5'
    ends

```
<400>  43
gggggggggg gacgatcgtc gggggggggg                              30


<210>  44
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3' and 5'
       ends

<400>  44
gacgatcgtc gggggggggg                                         20


<210>  45
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3' and 5'
       ends

<400>  45
gggggacgat cgtcggggggg                                        20


<210>  46
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3' and 5'
       ends

<400>  46
ggggggacga tcgtcggggg                                         20


<210>  47
<211>  20
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Core sequence of CpG DNA modified by adding poly G at 3' and 5'
       ends

<400>  47
gggggggggg gacgatcgtc                                         20
```

<210> 48
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA

<400> 48
acaacgttgt   10

<210> 49
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
      ends

<400> 49
gacaacgttg tggggggggg   20

<210> 50
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
      ends

<400> 50
gggggacaac gttgtggggg   20

<210> 51
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
      ends

<400> 51
gggggggggga caacgttgtg   20

<210> 52
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223>   Modified core sequence of CpG DNA with poly G added at 3' and 5'
         ends

<400>   52
gggggggggg acaacgttgt gggggggggg   30

<210>   53
<211>   10
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Modified core sequence of CpG DNA

<400>   53
gagcatgctc   10

<210>   54
<211>   10
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Modified core sequence of CpG DNA

<400>   54
gacgaacgtc   10

<210>   55
<211>   10
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Modified core sequence of CpG DNA

<400>   55
gacgttcgtc   10

<210>   56
<211>   10
<212>   DNA
<213>   Artificial Sequence

<220>
<223>   Modified core sequence of CpG DNA

<400>   56
gacgtacgtc   10

<210>   57
<211>   10

<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA

<400> 57
cacgatcgtg   10

<210> 58
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'ends

<400> 58
gggggggggg agcatgctcg   20

<210> 59
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
     ends

<400> 59
gggggggggg acgtacgtcg   20

<210> 60
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
     ends

<400> 60
gggggggggg acgaacgtcg   20

<210> 61
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Modified core sequence of CpG DNA with poly G added at 3' and 5'
     ends

<400>   61

gggggggggg acgttcgtcg   20

<210>   62
<211>   20
<212>   DNA
<213>   Artificial Sequence

<220>

<223>   Modified core sequence of CpG DNA with poly G added at 3' and 5'
        ends

<400>   62
ggggggggggc acgatcgtgg   20